

7.0 CHEMICAL INVENTORY DATABASE (CIS)

7.1 DATABASE ACCESS

All OEME personnel will have access (Read Only) to the Chemical Inventory Control System Database. Only the personnel with CIS inventory responsibilities (page 4 of this SOP) have "Write" access to the database.

7.2 INVENTORY UPDATE

The screenshot shows a web-based form titled "Update Chemical Inventory". At the top, there are navigation buttons: "First", "Prev", "Next", "Last", "Save", and "Cancel". The form is divided into several sections for data entry:

- Bar Code:** 16382
- Inventory Date:** 05/11/2004
- Room Number:** 177
- Building:** LAB
- Custodian:** PHILBROOK, PETER
- CAS Number:** 7601890
- Chemical Name:** SODIUM PERCHLORATE
- Weight (lbs):** 0.22
- Volume (liters):** (empty)
- Total (In Stock):** (empty)
- Manufacturer:** SIGMA-ALDRICH
- State:** Solid (selected), Liquid, Gas
- Date Rec'd:** 05/11/2004
- Expiration Date:** 05/11/2008
- Chemical Lot Number:** 02606DC
- Disposition:** In Use
- Disposition Date:** 05/11/2004
- Comments:** (empty text area)

Figure 1

The Inventory Screen consists of the following data fields:

Bar Code – This is the 5 - digit barcode number that is assigned and attached to the container as an identifier tag.

Inventory Date – The date of the initial database entry. Usually the date the chemical is received in the laboratory.

Building - LAB or SHED

Room- SHED: RM 231(acid storage), RM 232(flammable storage), RM 233 (hazardous waste storage), RM 234 (field equipment storage)

LAB: 171-17,181A, 181B, 182-18,190,190A, 191-195,201-209,212

LAB 001 is the code for chemicals that have to be used in the field. Any unused amounts of these chemicals are returned to their LAB storage areas locations.

LAB 000 is the default room number designation for empty chemical containers designated with an "E" in the inventory.

Custodian - Used in combination with disposition code U. Select the custodian's name from the drop down list (this is an employee list that is maintained in Boston).

CAS –The Chemical Abstract Registry Number is the number copied from the bottle label, from a chemical supply catalogue such as – the Merck Index, or the Aldrich Supply Catalogue etc. This number is entered into the database without hyphens or preceding zeroes as a chemical identifier of the chemical.

Chemical – This is the (most common) chemical name chosen from a listing of the chemical names in the CAS field.

State - (L) liquid or (S) solid

Manufacturer - Name of the manufacturer, for consistency select the name from the drop down list. If the manufacturer is not listed, the manufacturer will be added to the lookup list by Information Systems at the request of the Custodian.

Weight- Weight of the chemical in pounds. Accurate to 0.1 decimal points

Total - Read only field. Reflects total amount of chemical in stock (I-inventory)

Flag - Used to flag chemicals with special properties such as RCRA acutely hazardous substances (P) Toxics, (X) Peroxides

Volume - Optional for liquid chemicals

Expiration date - as listed on the manufacturers label on the container. If no expiration date or "use by" date is available from the manufacturer, a date five years from receipt of the chemical will be entered for new entries in the database.

Lot Number- As listed on the manufacturers label on the container. If a lot number (or batch number) is not provided, the field will be left blank

Disposition - (I) nventory, awaiting use. Usually in "SHED #231 or #232" (acids & solvents) or " LAB 181B" (dry chemicals) storage areas locations
(U)se, in use in a laboratory or the field
(E)mpty container, LAB location info defaulted to # 000/off inventory
(S)tored chemical in shed, awaiting disposal
(D)isposed off chemical inventory

Date received - Actual date of receipt of the chemical

Disposition date - Date the Disposition field is updated.

Note: Updating of the disposition code automatically updates the disposition date field to the current date.

Updating of the disposition code to E or D automatically updates the LAB Room Number to 000, the disposition date to the current date and removes the custodian's name.

Comments-Any comments

The Save and Cancel buttons will save or cancel any changes made to the current record. To facilitate inventorying a batch of chemicals, press the right button on the mouse and there is an option to Copy the current record.

7.3 ENTIRE LISTS UPDATE

This is a "Write Only" application that is primarily used to maintain and update the CAS/Chemical Name static data. Other information such as NFPA classification ratings, TPQs, and other hazard codes can also be stored here.

7.4 REPORTS

A report criteria screen is used to filter the data that is displayed or printed. You filter the data by making entries into the fields. If you make entries into multiple fields and an implicit 'and' is used to select the data. For example, entering a disposition of 'I' and chemical state of 'solid' will filter the inventory with all solid chemicals that are in use.

The " %" is used as a wildcard, to allow multiple selections of similar data sources. For example, entering 12% in the bar code field will select chemicals that have a bar code located between the numbers 12000 and 12999.

Report Criteria

Bar Code: %

Chemical: METHYL% ?

Flag: %

Custodian: % ?

Room:

Disposition: %

Date Range: // to //

Chemical State
☐ Solid ☐ Liquid ☐ Gas

Sort Order: Bar Code

Ok Cancel

Figure 2

Note: Database queries can only find chemical names listed in the database, since many chemicals can be identified by different names the use of wild cards and multiple searches may be required to ensure that there are no entries for a specific chemical.

Currently, there are four standard reports used in the system.

1. Total Report - groups chemicals by name and lists the number of containers and total weight.

This report lists chemicals that begin with 'METHYL%'. This was entered into the Chemical Name Field in the Reports Criteria Screen. Alternatively, entering '%METHYL%' would find any chemical that contains the word METHYL instead of begins with.

Date: 06/20/2002		Chemical Totals In Use		Page: 1	
CAS NO	Chemical Name	Containers	Weight		
493527	METHYL RED	1	0.05		
61734	METHYLENE BLUE	1	0.17		
75092	METHYLENE CHLORIDE	1	11.7		
		Totals:	3		11.92

Figure 3

2. Detail Report - lists the bar code, chemical name, disposition and room number. This report is useful for locating a particular chemical. Again, this report was generated by entering METHYL% in the chemical name field on the Reports Criteria Screen.

The screenshot shows a software window titled "Chemical Detail Report". The window has a standard Windows-style title bar with minimize, maximize, and close buttons. Below the title bar is a toolbar with icons for print, save, and other functions, along with a "Close" button. The main content area displays a report with the following information:

Date: 08/20/2002

Chemical Detail Report

Page: 1

Bar Code	Chemical Name	Room	Disp	Disp Date	Weight
10579	METHYLENE BLUE	207	U	12/28/2001	0.17
12029	METHYL RED	208	U	12/28/2001	0.05
13584	METHYLENE CHLORIDE	192	U	05/15/2002	11.7

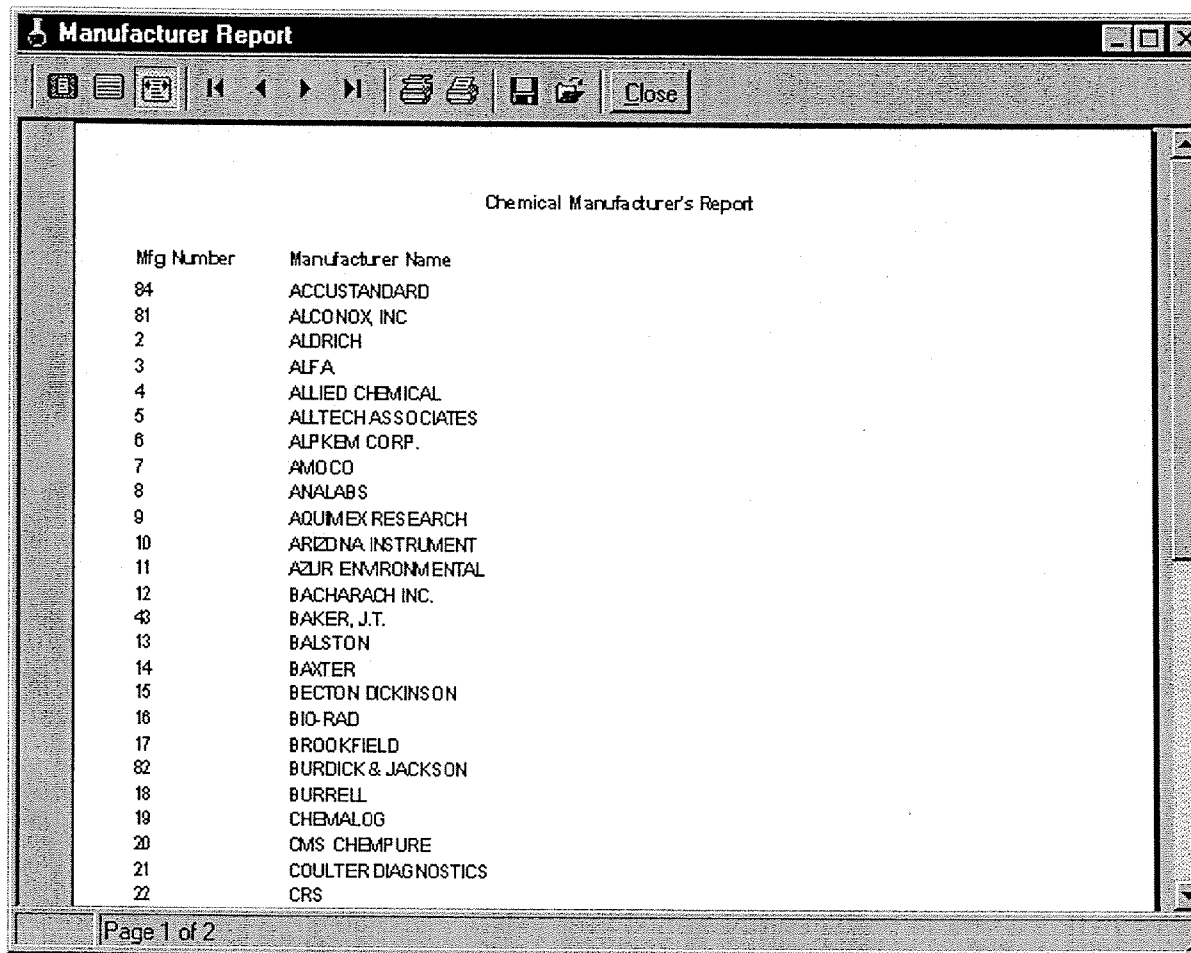
Number of Chemicals: 3

Total: 11.92

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Figure 4

3. Manufacturer Report - This report lists the common manufacturers of chemicals used at the Laboratory. This list is used for lookup purposes only.



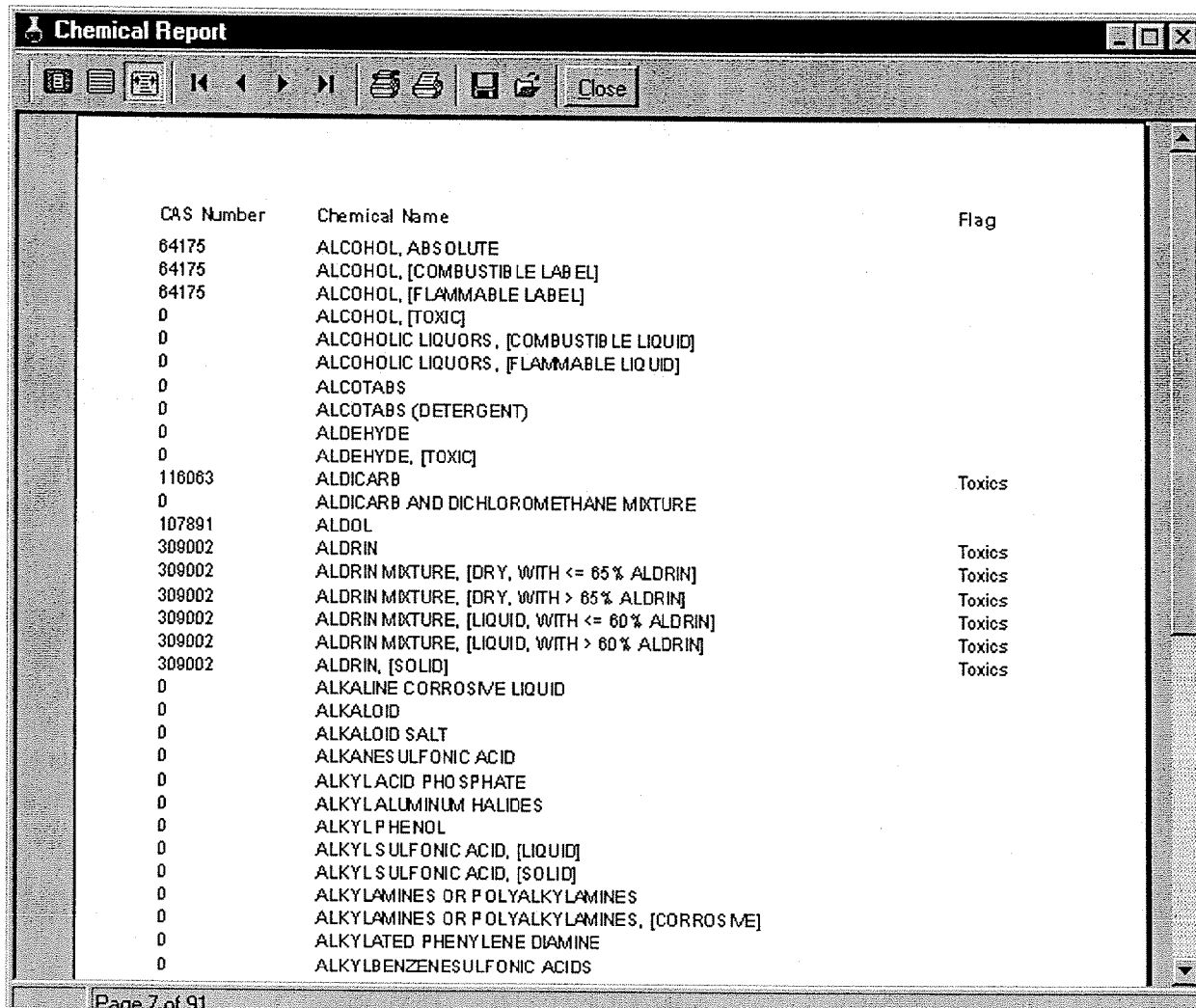
The screenshot shows a software window titled "Manufacturer Report". The window has a standard Windows-style title bar with minimize, maximize, and close buttons. Below the title bar is a toolbar with icons for print, save, and other functions, along with a "Close" button. The main content area displays a list titled "Chemical Manufacturer's Report". The list has two columns: "Mfg Number" and "Manufacturer Name". The list contains 22 entries, numbered 04 through 22. The window also has a status bar at the bottom that says "Page 1 of 2".

Mfg Number	Manufacturer Name
04	ACCUSTANDARD
01	ALCONOX, INC
2	ALDRICH
3	ALFA
4	ALLIED CHEMICAL
5	ALLTECH ASSOCIATES
6	ALPKEM CORP.
7	AMOCO
8	ANALABS
9	AQUIMEX RESEARCH
10	ARIZONA INSTRUMENT
11	AZUR ENVIRONMENTAL
12	BACHARACH INC.
43	BAKER, J.T.
13	BALSTON
14	BAXTER
15	BECTON DICKINSON
16	BIO-RAD
17	BROOKFIELD
02	BURDICK & JACKSON
18	BURRELL
19	CHEMLOG
20	CMS CHEMPURE
21	COULTER DIAGNOSTICS
22	CRS

Figure 5

4. Chemical Report - This report is a complete list of chemicals and is used for lookup when

adding chemicals into our inventory. The report lists the CAS number, chemical name, and flag (Peroxide or Toxics).



CAS Number	Chemical Name	Flag
64175	ALCOHOL, ABSOLUTE	
64175	ALCOHOL, [COMBUSTIBLE LABEL]	
64175	ALCOHOL, [FLAMMABLE LABEL]	
0	ALCOHOL, [TOXIC]	
0	ALCOHOLIC LIQUORS, [COMBUSTIBLE LIQUID]	
0	ALCOHOLIC LIQUORS, [FLAMMABLE LIQUID]	
0	ALCOTABS	
0	ALCOTABS (DETERGENT)	
0	ALDEHYDE	
0	ALDEHYDE, [TOXIC]	
116063	ALDICARB	Toxics
0	ALDICARB AND DICHLOROMETHANE MIXTURE	
107891	ALDOL	
309002	ALDRIN	Toxics
309002	ALDRIN MIXTURE, [DRY, WITH <= 65% ALDRIN]	Toxics
309002	ALDRIN MIXTURE, [DRY, WITH > 65% ALDRIN]	Toxics
309002	ALDRIN MIXTURE, [LIQUID, WITH <= 60% ALDRIN]	Toxics
309002	ALDRIN MIXTURE, [LIQUID, WITH > 60% ALDRIN]	Toxics
309002	ALDRIN, [SOLID]	Toxics
0	ALKALINE CORROSIVE LIQUID	
0	ALKALOID	
0	ALKALOID SALT	
0	ALKANESULFONIC ACID	
0	ALKYLACID PHOSPHATE	
0	ALKYLALUMINUM HALIDES	
0	ALKYLPHENOL	
0	ALKYLSULFONIC ACID, [LIQUID]	
0	ALKYLSULFONIC ACID, [SOLID]	
0	ALKYLAMINES OR POLYALKYLAMINES	
0	ALKYLAMINES OR POLYALKYLAMINES, [CORROSIVE]	
0	ALKYLATED PHENYLENE DIAMINE	
0	ALKYLBENZENESULFONIC ACIDS	

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Figure 6

7.5 OTHER FEATURES

7.5.1 Physical Inventory

In order to keep our inventory as accurate as possible, the HS or his/ her designee conducts a physical inventory on an annual basis or as required. A dedicated notebook computer and bar code reader are used to perform the physical inventory. This allows the user to move the notebook from room to room and easily scan the bar codes off the chemicals. An exception report, using specific criteria in the detail report, is processed to identify chemicals that have not been inventoried.

7.5.2 Inventory History

Periodically, the inventory must be archived to keep the system running as efficiently as possible. On an annual basis or after a physical inventory, chemicals that are empty or disposed of are moved from the active inventory to the archived inventory. The archived inventory is accessible from the Tables menu in CIS.

7.5.3 Searching and Sorting

Two menu options, Search and Sort, allow the user to easily locate a particular chemical. You can search and sort by bar code, chemical, or CAS number.

8.0 MATERIAL SAFETY DATA SHEETS

8.1 MSDS REQUIREMENT

OSHA HAZCOM requires that Material Safety Data Sheets must be readily accessible to employees when they are in their work areas. MSDSs must be available for all hazardous chemicals used in the workplace where the duration and frequency of use is not greater than what the typical consumer would experience. Therefore, typical office supplies and general maintenance chemicals are exempt from the MSDS access requirements by OSHA HAZCOM regulations. At OEME this would apply to such things as copier toner, WD-40, touch-up paints, cleaning supplies, etc. (see FAQs at WWW.osha.gov).

Generic MSDSs are acceptable as long as the hazards of the various constituent chemicals are included. The MSDS does not have to be for the specific concentration so long as the hazardous constituents and hazards are identified (see FAQs at WWW.osha.gov).